
Nomenclatural Consequences of the Synonymization of *Hypsela reniformis* (Campanulaceae: Lobelioideae)

Thomas G. Lammers

Department of Botany, Field Museum of Natural History, Chicago, Illinois 60605-2496, U.S.A.
lammers@fmnh.org

ABSTRACT. The recent synonymization of *Hypsela reniformis* with *Pratia repens* has necessitated several nomenclatural changes. The enlarged circumscription of *P. repens* dictates the validation of a new combination to cover the species when it is considered a member of *Lobelia*. Because *H. reniformis* was the type of its genus, its three remaining congeners can no longer employ that generic name. They are transferred to *Isotoma*, from which they differ solely in the possession of indehiscent (vs. capsular) fruit.

Recently, Chiapella (1996) demonstrated statistically that two long-recognized South American species of Lobelioideae (Campanulaceae), *Hypsela reniformis* (Kunth) C. Presl (including *Pratia longiflora* J. D. Hooker) and *Pratia repens* Gaudichaud, could not be distinguished in any meaningful way, i.e., that the two names pertained to a single species. This conclusion has nomenclatural consequences that extend beyond South America and a simple taxonomic merger. The purpose of this paper is to effect changes necessitated by Chiapella's (1996) findings, in preparation for a forthcoming checklist of the species of Campanulaceae (cf. Lammers, 1995, 1998a).

GENERIC CONSIDERATIONS

Coincidentally, each species is the type of its respective genus. As a result, their merger into one species means that these two genera must likewise be merged. *Pratia* Gaudichaud, the name under which far more species have been described, has 11 years priority over *Hypsela* C. Presl, and was the name adopted by Chiapella (1996), as well as by Baillon (1885), who treated *Hypsela* as a section of *Pratia*.

However, there has been a growing trend over the past 40 years to not recognize *Pratia* as a distinct genus. The primary character used to distinguish it from *Lobelia* L. has been its indehiscent (vs. capsular) fruit (Bentham, 1876; McVaugh, 1943; Wimmer, 1943, 1953). However, various

workers have called attention to intraspecific variation in fruit type (Moeliono & Tuyn, 1960), a lack of correlation between fruit type and other characters (Albrecht, 1994), and the greater overall resemblance of various species of *Pratia* to species of *Lobelia* than to congeners (Adams, 1972; Wilbur, 1991; Murata, 1995), and subsumed *Pratia* into *Lobelia*. As a result, *Hypsela* should also be regarded as a synonym of *Lobelia*, as indicated in the partial synonymy below:

Lobelia L., Sp. Pl. 929. 1753; Gen. Pl. (ed. 5) 401. 1754. TYPE: *Lobelia cardinalis* L. (lectotype, designated by Hitchcock & Green (1929: 184)).

Pratia Gaudichaud, Ann. Sci. Nat. 5: 103. 1825. *Lobelia* [no rank indicated] *Pratia* (Gaudichaud) Heynhold, Nom. Bot. Hort. 1: 473. 1840. *Lobelia* sect. *Pratia* (Gaudichaud) J. Murata, J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 15: 356. 1995. TYPE: *Pratia repens* Gaudichaud.

Hypsela C. Presl, Prodr. Monogr. Lobel. 45. 1836. Syn. nov. *Lysipomia* sect. *Hypsela* (C. Presl) A. DC., in DC., Prodr. 7: 350. 1839. *Pratia* sect. *Hypsela* (C. Presl) Baillon, Hist. Pl. 8: 366. 1885. TYPE: *Hypsela reniformis* (Kunth) C. Presl.

THE CORRECT NAME FOR *PRATIA REPENS* S.L. IN *LOBELIA*

Chiapella (1996) used the name *Pratia repens* for the more broadly circumscribed species resulting from the merger. The basionym of *H. reniformis*, *Lysipomia reniformis* Kunth, had been published six years earlier, but its use in *Pratia* was preempted by *P. reniformis* (Chamisso) Kanitz. The situation becomes more complicated when the species of *Pratia* are transferred to *Lobelia*.

Transferring the epithet of *P. repens* to *Lobelia* is precluded by *L. repens* Thunberg. Consequently, I recently (Lammers, 1998a) validated the name *L. pratiana* Gaudichaud ex Lammers, originally suggested by Murata (1995) as a *nomen novum*. This is the correct name in *Lobelia* for *Pratia repens* s. str. However, it is not the correct name for the species in its expanded circumscription.

The epithets of *Hypsela reniformis* and *Pratia longiflora* likewise cannot be transferred to *Lobelia*, due to the existence of *L. reniformis* Chamisso and *L. longiflora* L., respectively. However, the synonymy of *Hypsela reniformis* (Wimmer, 1943; Jeppesen, 1981; Lammers et al., 1993) includes four additional heterotypic names, all of which antedate *Lobelia pratiana*. Two of these have equal priority, and there is no impediment to taking up either epithet. The one that seems more appropriate morphologically is transferred to *Lobelia*, to provide a name in that genus for *Pratia repens* s.l. It would also be the correct name for *H. reniformis* if that species were to be maintained as distinct from *P. repens* but likewise assigned to *Lobelia*. For clarity, complete synonymy is provided here for the species, as circumscribed by Chiapella (1996).

Lobelia oligophylla (Weddell) Lammers, comb. nov. Basionym: *Pratia oligophylla* Weddell, Chlor. And. 2: 10. 1857. *Hypsela oligophylla* (Weddell) Bentham & J. D. Hooker ex Zahlbruckner, Bull. Torrey Bot. Club 24: 387. 1897. TYPE: Peru. Cordillière de Tacora, notamment au voisinage de la métairie de Chunlunquaiani, pelouses un peu marécageuses des punas, 4000 m, Weddell s.n. (holotype, P not seen).

Lysipomia reniformis Kunth, in H.B.K., Nov. Gen. Sp. 3: 320. 1819; non *Lobelia reniformis* Chamisso, Linnaea 8: 210. 1833. *Hypsela reniformis* (Kunth) C. Presl, Prodr. Monogr. Lobel. 45. 1836. TYPE: Ecuador. Propter speluncam Antisanæ, 15,000 ft., Humboldt & Bonpland s.n. (holotype, P not seen).

Pratia repens Gaudichaud, Ann. Sci. Nat. 5: 103. 1825; non *Lobelia repens* Thunberg, Prodr. Fl. Cap. 40. 1794. *Lobelia pratiana* Gaudichaud ex Lammers, Novon 8: 34. 1998. TYPE: Falkland Islands. Gaudichaud s.n. (holotype, P not seen).

Pratia longiflora J. D. Hooker, Fl. Antarct. 325. 1846; non *Lobelia longiflora* L., Sp. Pl. 930. 1753. *Hypsela longiflora* (J. D. Hooker) F. Philippi, Cat. Pl. Vasc. Chil. 232. 1881. TYPE: Chile. Straits of Magellan, Cape Negro, Darwin s.n. (holotype, K not seen).

Pratia subsessilis Weddell, Chlor. And. 2: 10. 1857. *Hypsela subsessilis* (Weddell) Bentham & J. D. Hooker ex Zahlbruckner, Bull. Torrey Bot. Club 24: 387. 1897. TYPE: Bolivia. Province de Cinti, pelouses un peu marécageuses et bords des ruisseaux, dans les punas, 3500 m, Weddell s.n. (holotype, P not seen).

Pratia atacamensis R. A. Philippi, Fl. Atacam. 208. 1860. *Hypsela atacamensis* (R. A. Philippi) F. Philippi, Cat. Pl. Vasc. Chil. 232. 1881. TYPE: Chile. Frequens ad fontes deserti Atacamensis, Jan.–Feb. 1854, Philippi s.n. (holotype, SGO).

Pratia pencana R. A. Philippi, Anal. Univ. Chile 18: 53. 1861. TYPE: Chile. Coquimbo: Huanta, 1860, Vohkmann s.n. (holotype, SGO).

DISPOSITION OF ORPHANED *HYPSELA* SPECIES

There remains the question of what to do with the remaining species of *Hypsela*. In the most recent monograph (Wimmer, 1943), three species were recognized in addition to the type. None occur in South America, but rather are endemic to Australasia: *H. rivalis* F. E. Wimmer to New Zealand, and *H. sessiliflora* F. E. Wimmer and *H. tridens* F. E. Wimmer to Australia. These species obviously can no longer go by the name *Hypsela*.

It might be logical to suggest that they follow the generic type into *Lobelia*. However, this would not be an optimal disposition. Even prior to Chiapella's (1996) research, I had suspected that the South American and Australasian elements of *Hypsela* were not congeneric. In the three Australasian species, the staminal column is adnate to the corolla for at least half its length, while in *L. oligophylla* it is free or only adnate to the corolla at its base. Such pronounced adnation is unusual in the subfamily; most genera, including *Lobelia*, are characterized by having the staminal column free from the corolla or only adnate to the corolla at its base (Bentham, 1876; Schönland, 1889; McVaugh, 1943; Wimmer, 1953). Similarly, the entire corolla tube that characterizes these species is an unusual feature in *Lobelia*, occurring in very few species, none of them Australasian.

It might be reasonable to erect a new genus for these three orphans, as no existing genus of *Lobelioideae* combines their herbaceous habit, creeping prostrate stems, small flowers solitary in leaf axils, corollas with a cylindrical entire tube and small subequal lobes, filament tubes adnate to the middle of the corolla tube, ventral anthers with a long flat triangular trichome and tufts of minute hairs at the apex of each, and indehiscent fruits. However, there is one genus in which all these features save one may be found.

Isotoma (R. Brown) Lindley (excluding *Hippobroma* G. Don) comprises 11 species endemic to Australia (Wimmer, 1953; Melville, 1960; Elliot & Jones, 1990). The genus is characterized by its herbaceous habit, corollas with a cylindrical entire tube and small subequal lobes, filament tubes adnate to the middle of the corolla tube, ventral anthers with a pair of long setae and tufts of minute hairs at their apex, and apically loculicidal capsules. All but one species, *I. hypocrateriformis* (R. Brown) Druce, have solitary axillary flowers, and two of these, *I. fluviatilis* (R. Brown) F. Mueller ex Bentham and *I. luticola* Carolin, have creeping prostrate stems. As noted by Wimmer (1943), *H. rivalis* bears a striking resemblance to *I. fluviatilis* and has

often been mistaken for it (cf. Allan, 1961; Beuzenberg & Hair, 1959, 1983).

The only feature that distinguishes *Isotoma* from the three orphan species are its capsular fruits. Given current thinking on the inappropriateness of indehiscence as a generic character in Campanulaceae (Moeliono & Tuyn, 1960; Adams, 1972; Wilbur, 1991; Albrecht, 1994; Murata, 1995; Lammers, 1992, 1993, 1998a, 1998b; Morris & Lammers, 1997; Pepper et al., 1997), establishment of a new genus on this basis would be inadvisable. Just as *Lobelia* can accommodate the species of *Pratia*, *Isotoma* is judged to be the best home for the three species orphaned by the synonymization of *Hypsela reniformis*. The requisite combinations are established here.

Isotoma (R. Brown) Lindley, Bot. Reg. 12: pl. 964. 1826. Basionym: *Lobelia* [no rank indicated] *Isotoma* R. Brown, Prodr. 565. 1810. *Laurentia* [no rank indicated] *Isotoma* (R. Brown) Endlicher, Gen. Pl. 512. 1838. *Laurentia* subg. *Isotoma* (R. Brown) Petermann, Pflanzenr. 444. 1845. *Laurentia* sect. *Isotoma* (R. Brown) F. E. Wimmer, Ann. Naturhist. Mus. Wien 56: 335. 1948. TYPE: *Lobelia hypocrateriformis* R. Brown.

Isotoma rivalis (F. E. Wimmer) Lammers, comb. nov. Basionym: *Hypsela rivalis* F. E. Wimmer, Pflanzenr. IV.276b: 121. 1943. TYPE: New Zealand. South Island: Broken River, Kirk 464 (holotype, CGE not seen).

Isotoma sessiliflora (F. E. Wimmer) Lammers, comb. nov. Basionym: *Hypsela sessiliflora* E. Wimmer, Pflanzenr. IV.276b: 121. 1943. TYPE: Australia. New South Wales: Port Jackson, Bauer s.n. (holotype, W not seen).

Isotoma tridens (F. E. Wimmer) Lammers, comb. nov. Basionym: *Hypsela tridens* F. E. Wimmer, Pflanzenr. IV.276b: 121. 1943. TYPE: Australia. Sine loc., Cunningham s.n. (holotype, W not seen).

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